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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

AHN, SANGWOO

ART UNIT	PAPER NUMBER
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2166

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/771,583	Applicant(s) HALL, KENWOOD	
	Examiner Sangwoo Ahn	Art Unit 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☒ Claim(s) 17 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11122004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 17 and 23 are objected to because of the following informalities:

Claim 17 recites, “ ... utilizing a JDBC Open or Select command(s) is utilized to read data from the one or more database and a JDBC Post Command(s) is utilized to write data ... ”. There seems to be a grammatical error in this phrase.

Claim 23 recites “industrial devices data”. There is a typological error.

Appropriate corrections are required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 7, 9 – 12, 14 – 24, 26, 28 – 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,122,639 issued to Babu et al (hereinafter “Babu”) in view of U.S. Patent Number 6,999,956 issued to Mullins.

Regarding claim 1, Babu discloses a system that facilitates data exchange with industrial devices via a standard database connection (Figures 1 – 3, et seq.), comprising:

a mapping component that represents data stored within an industrial device as a database table (column 13 lines 5 – 8, et seq.).

Babu does not *explicitly* disclose an interface component that provides access to the database table via the standard database connection.

However, Mullins discloses an interface component that provides access to the database table via the standard database connection (column 4 lines 18 – 19, et seq.). At the time of the present invention, it would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Mullin's method of providing access via a standard database connection would have enabled Babu's overall system to access databases directly regardless of their types, thus saving time and processing cost.

Regarding claim 2, Mullins discloses a Java DataBase Connectivity (JDBC) connection (column 4 lines 18 – 19, et seq.).

Regarding claim 3, Babu discloses the database table is a relational database table (column 7 lines 17 – 18, et seq.).

Regarding claim 4, Babu discloses the elements of the data structure are mapped to respective record columns of the database table (column 13 lines 6 – 7, et seq.).

Regarding claim 5, Babu discloses the database table is accessed via one or more remote systems that employ disparate operating systems (Figure 1, et seq.).

Regarding claim 6, Babu discloses the disparate operating system include one or more of UNIX, HPUX, IBM, AIX, Linux and Microsoft (column 6 lines 41 – 45, column 20 line 31, et seq.).

Regarding claim 7, Mullins discloses the access includes read and write access (column 49 lines 48 – 50, et seq.).

Regarding claim 9, Mullins discloses the interface component facilitates discovery of industrial device data and the database table (column 49 lines 48 – 50, et seq.).

Regarding claim 10, Babu and Mullins disclose an industrial control device that enables access to data stored therein via a standard database connection (Babu: Figures 1 – 3, et seq.), comprising:

an interface that facilitates reading from and writing to one or more relational database tables stored within the industrial control device (Mullins: column 4 lines 18 – 19, column 49 lines 48 – 50, et seq.); and

a transformation component that maps one or more data structures associated with the industrial control device to the one or more relational database tables (Babu: column 13 lines 5 – 8, et seq.).

Regarding claim 11, Mullins discloses the transformation component is executed within one of a module of the industrial control device, a host computer, and the interface (column 49 lines 48 – 50, et seq.).

Regarding claim 12, Mullins discloses the transformation component is executed within one of a module of the industrial control device, a host computer, and the interface (column 49 lines 48 – 50, et seq.).

Regarding claim 14, Mullins discloses the standard database connection is employed to establish a connection with the interface by a remote device (column 4 lines 18 – 19, et seq.).

Regarding claim 15, Mullins discloses the standard database connection is an SQL-compliant connection (column 2 lines 47 – 48, et seq.).

Regarding claim 16, Mullins discloses the standard database connection is a Java DataBase Connectivity (JDBC) connection (column 4 lines 18 – 19, et seq.).

Regarding claim 17, it is inherent that Mullins discloses utilizing Open, Select, and Post command(s) to read and write, since Mullins discloses JDBC as the standard database connection. Use of these commands is also well known in the art.

Regarding claim 18, Babu and Mullins disclose mapping (Babu: column 13 lines 5 – 8, et seq.), reading and writing the industrial device data (Mullins: column 49 lines 48 – 50, et seq.).

Regarding claim 19, Babu and Mullins disclose a method that facilitates access to industrial devices via a standard database connection (Mullins: column 4 lines 18 – 19, Babu: Figures 1 – 3, et seq.), comprising:

retrieving industrial device data (Babu: column 13 lines 5 – 8, et seq.);

generating at least one database table (Babu: column 13 lines 5 – 8, et seq.);

mapping the industrial device data to the at least one database table (Babu: column 13 lines 5 – 8, et seq.); and

providing access to the data in the at least one database table via a Java DataBase Connectivity (JDBC) connection (Mullins: column 4 lines 18 – 19, et seq.).

Regarding claim 20, Babu discloses automatically updating the at least one database table when industrial control data changes (column 12 lines 55 – 58, column 13 lines 31 – 32, et seq.).

Regarding claim 21, Babu discloses generating and mapping data to the at least one database table (column 13 lines 5 – 8, et seq.).

Regarding claim 22, Babu discloses disparate operating system include one or more of UNIX, HP-UX, IBM, AIX, Linux and Microsoft (column 6 lines 41 – 45, column 20 line 31, et seq.).

Regarding claim 23, Babu and Mullins disclose a method for accessing industrial device data, comprising:

establishing a connection with an industrial device via an SQL-compliant database connection (Mullins; column 2 lines 47 – 48, et seq.);

discovering relational database tables stored within the industrial device (Babu: Figures 1 – 3, et seq.); and

accessing the data within the relational database tables (Babu: Figures 1 – 3, et seq.).

Regarding claim 24, Mullins discloses the SQL-compliant database connection is a Java DataBase Connectivity (JDBC) connection (column 4 lines 18 – 19, et seq.).

Regarding claim 26, Mullins discloses accessing the data in the relational database tables (column 4 lines 18 – 19, column 49 lines 48 – 50, et seq.).

Regarding claim 29, Babu and Mullins disclose a system that enables access to database tables associated with industrial devices, comprising:

means for opening a database connection with the industrial device (Mullins: column 4 lines 18 – 19, et seq.);

means for mapping data from at least one data structure to at least one database table (Babu: column 13 lines 5 – 8, et seq.);

means for discovering the at least one database table (Babu: Figures 1 – 3, et seq.); and

means for accessing the discovered database tables (Babu: Figures 1 – 3, Mullins: column 4 lines 18 – 19, column 49 lines 48 – 50, et seq.).

Claims 8 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babu and Mullins as applied to claim 1 above, and further in view of U.S. Patent Number 6,523,036 issued to Hickman et al (hereinafter “Hickman”).

Regarding claim 8, Babu and Mullins disclose the system of claim 1.

Babu and Mullins do not explicitly disclose the data stored in the database table is transferred as a binary file.

However, Hickman discloses a binary file that is transferable (column 24 lines 21 – 22, et seq.). At the time of the present invention, it would have been obvious to a person of ordinary skill in the data processing art to combine the aforementioned

references because Hickman's binary file would have enabled Babu and Mullins' system to save data storage space.

Claim 27 is also rejected based on the same rationale discussed above.

Claims 13 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babu and Mullins as applied to claim 10 above, and further in view of U.S. Patent Number 6,256,637 issued to Venkatesh et al (hereinafter "Venkatesh").

Regarding claim 13, Babu and Mullins disclose the system of claim 10.

Babu and Mullins do not explicitly disclose concurrent access for at least one of transaction commitment, transaction rollback and transaction termination.

However, Venkatesh discloses concurrent access for at least one of transaction commitment, transaction rollback and transaction termination (Figures 5 and 11, et seq.). At the time of the present invention, it would have been obvious to a person of ordinary skill in the data processing art to combine the aforementioned references because Venkatesh's concurrent access would have enabled Babu and Mullins' system to have multiple users having access to information at a greater speed, and maintain integrity of the objects in the database.

Claim 25 is also rejected based on the same rationale discussed above.

Art Unit: 2166

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sangwoo Ahn whose telephone number is (571) 272-5626. The examiner can normally be reached on M-F 10-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571)272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sangwoo Ahn
Patent Examiner
AU 2166

7/6/2006 SW


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SUPERVISORY PATENT EXAMINER